

To determine the pounds of organic load use the following:

$$\begin{aligned}\text{Lbs BOD} &= 2.85 \text{ MGD} \times 8.34 \times 255 \text{ mg/l} \\ &= \\ &6,061.09 \text{ lbs BOD/Day}\end{aligned}$$

To determine 1000 ft³ units us the following:

$$\begin{aligned}\frac{2,500,000 \text{ gal}}{7.48 \text{ gal/ ft}^3} \\ =\end{aligned}$$

$$\begin{aligned}\frac{334,224.5 \text{ ft}^3}{1,000} \\ = \\ 334.224_{1000\text{ft}^3}\end{aligned}$$

To determine Organic loading use the following:

$$\begin{aligned}&= \\ &\frac{6,061.09 \text{ lbs BOD}}{334.224_{1000\text{ft}^3}} \\ &= \\ &18.13 \text{ lbs BOD/1000ft}^3\end{aligned}$$